



**COMISION NACIONAL DE ENERGIA**

# **RURAL ELECTRIFICATION PROGRAM**

## **PROPOSAL FOR INCLUSION IN THE PRIVATIZACION PROCESS OF ENEL**

**Managua, Nicaragua**

**January, 2000**



**COMISION NACIONAL DE ENERGIA**

**LEGAL FRAMEWORK**

**LEY DE LA INDUSTRIA ELECTRICA**

**Law No. 272**

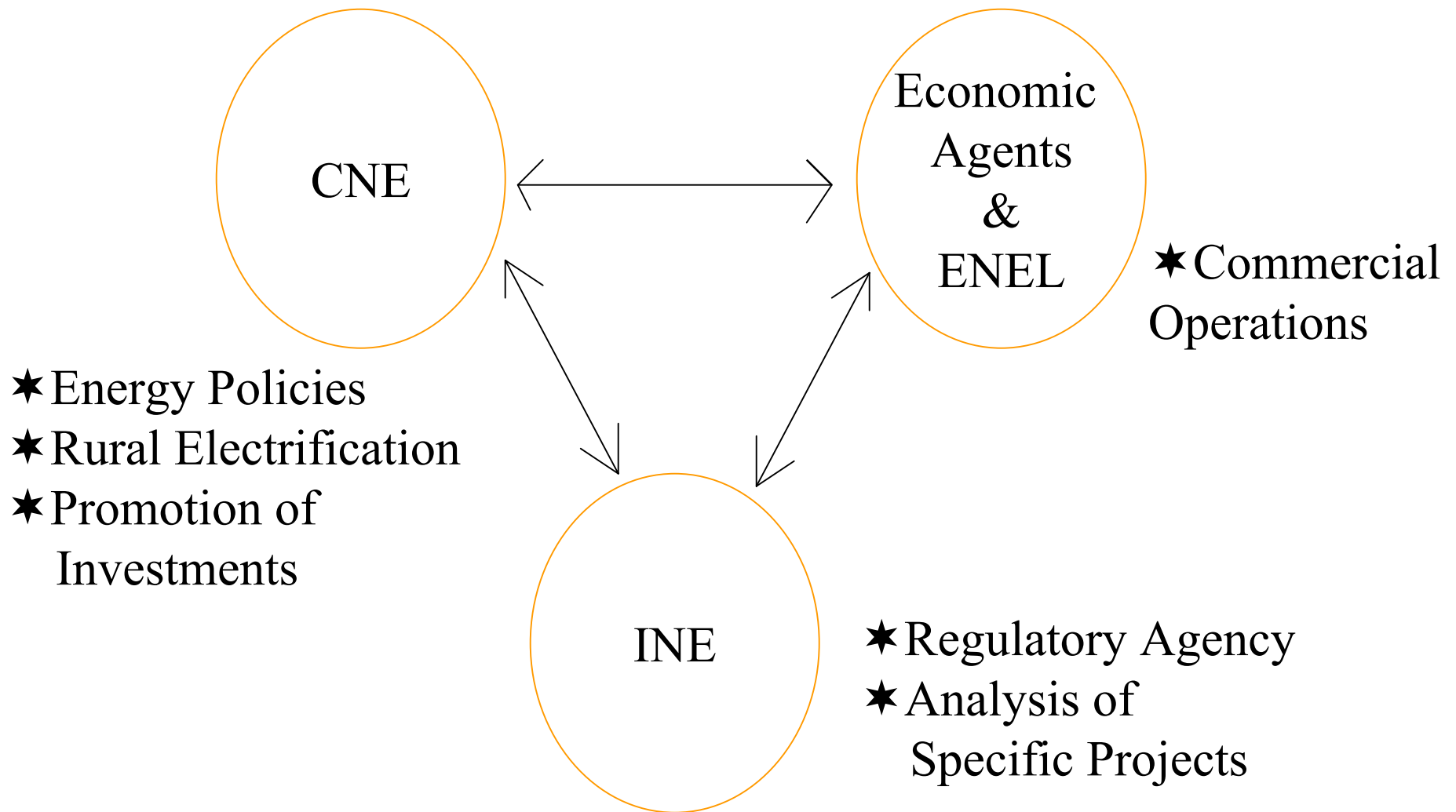
**Chapter III**

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# COMISION NACIONAL DE ENERGIA





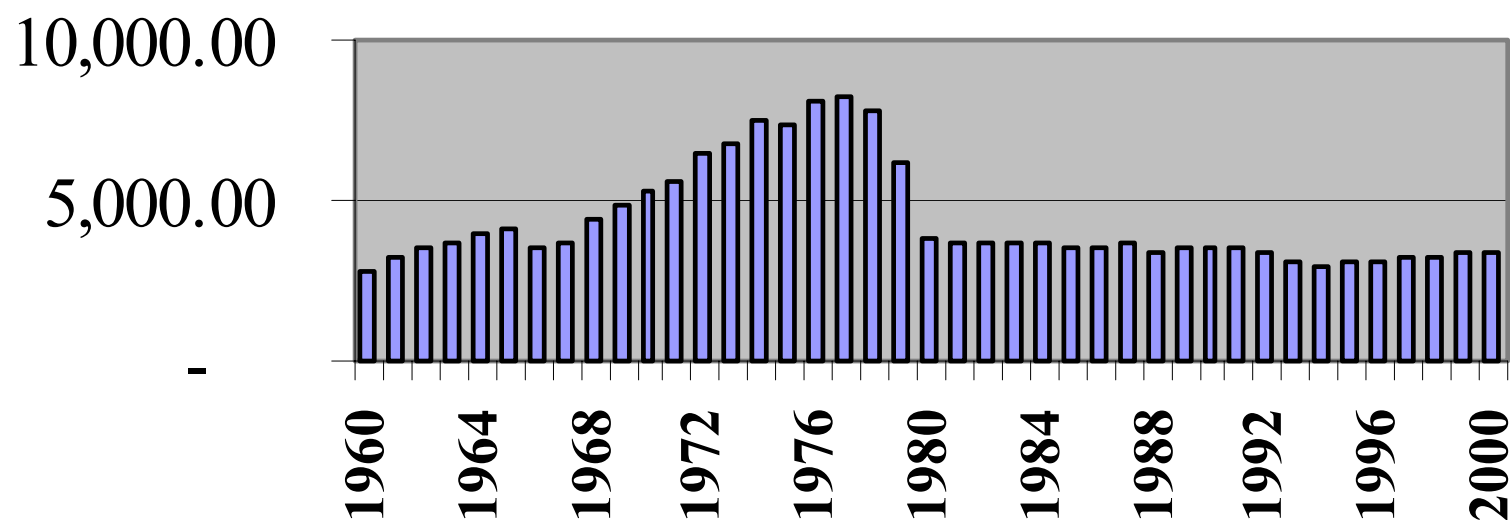
# **BACKGROUND**

- **Availability, accuracy, and consistency of the existing information**
- **Desire and need of the electric service**
- **Willingness to pay**
- **Cost estimates of the required investments**
- **Timeframe**
- **Development strategies**
- **Context of ENEL privatization**



# Consumo Energético Nacional

■ kW-hr/cliente-año





## PLANTAS SIN

| <u>Año</u> | <u>Planta</u>            | <u>Tipo</u> | <u>Capacidad</u> |                 | <u>Capacidad Acumulada</u> |                 |
|------------|--------------------------|-------------|------------------|-----------------|----------------------------|-----------------|
|            |                          |             | <u>Nominal</u>   | <u>Efectiva</u> | <u>Nominal</u>             | <u>Efectiva</u> |
|            |                          |             | (MW)             | (MW)            | (MW)                       | (MW)            |
| 1960       | Managua                  | TV          | 57.50            | 47.00           | 57.50                      | 47.00           |
| 1964       | Centroamerica            | HE          | 50.00            | 48.00           | 107.50                     | 95.00           |
| 1967       | Chinandega               | TG          | 15.00            | 14.00           | 122.50                     | 109.00          |
| 1971       | Santa Barbara            | HE          | 50.00            | 46.00           | 172.50                     | 155.00          |
| 1976       | Nicaragua                | TV          | 100.00           | 100.00          | 272.50                     | 255.00          |
| 1983       | Momotombo                | GE          | 70.00            | 14.00           | 342.50                     | 269.00          |
| 1990       | Guabule & Las Canoas     | HE          | 3.40             | 3.40            | 345.90                     | 272.40          |
| 1991       | Puerto Cabezas & Ometepe | DO          | 6.20             | 3.40            | 352.10                     | 275.80          |
| 1992       | Jose Dolores Estrada     | TG          | 63.00            | 62.00           | 415.10                     | 337.80          |
| 1997       | AMFELS                   | DO          | 36.00            | 35.00           | 451.10                     | 372.80          |
| 1998       | Corn Island              | DO          | 0.80             | 0.80            | 451.90                     | 373.60          |
| 1999       | Coastal & ENRON          | DO          | 126.70           | 102.20          | 578.60                     | 475.80          |



# **RESULTS**

- **Geographic Information System – BID & PREEICA**
  - **Rural communities referenced to national coordinates and electrical infrastructure**
  - **Socio-economic Information**
- **59.65 % of population served on Pacific and Central**
  - **26 % rural**
  - **88 % urban**
- **99.4 % of surveyed population need/want electric service**
- **Consumption per user estimated between 30 and 80 kW-hr/mo**
- **Willingness to pay US \$5 - US \$8 per month**
- **Plans and Development Policy of Rural Electrification**



# **CONCLUSIONS**

- **Short-term development strategy within the privatization of ENEL**
- **Subsidy of initial investment**
- **Integrate social and economic rural development**
- **Rural Electricity rates - differentiated, preferencial and stables**
- **Quality Standards of the rural service**
- **Social, economic and political impact of the proposed projects**
- **Action and development plan for rural electrification**





**Current**

**463,554 users  
2,982,500 population  
59.65% coverage**

**Changes in the  
area and  
accumulated  
statistics**

**5 Kms**

**160,031 users  
1,024,198 population  
US \$82 MM  
US \$512/user**

**623,585 users  
4,006,698 population  
77.80 % coverage  
US \$ 82 MM**

**5 Kms**

**41,170 users  
271,722 population  
US \$66 MM  
US \$1,603/user**

**664,755 users  
4,278,420 population  
80.66 % coverage  
US \$148 MM**

**10 or more  
Kms**

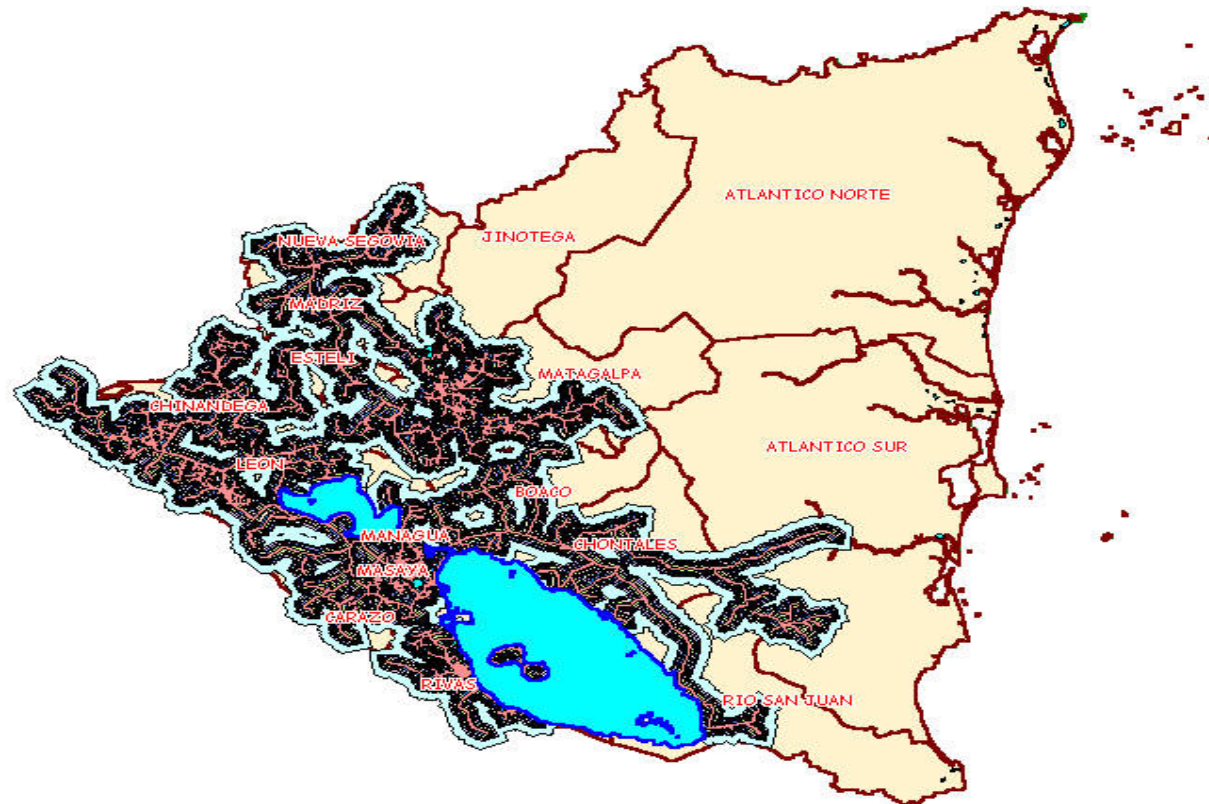
**33,504 users  
220,500 population  
US \$59 MM  
US \$1,761/user**

**698,259 users  
4,546,025 total  
population  
90.54 % coverage  
US \$207 MM**



# AREAS TO SERVE

2000-2010





# **PROPOSED ACTION PLAN**

- **Allocate proceeds resulting from the privatization of ENEL for the implementation of a RE project in a timeframe of 5-10 years**
- **Create a Trust Fund or another alternative to secure the use of the funds over the duration of the plan according with the Investment Bankers**
- **Incorporate these decisions to the contents of the “road show”**
- **Include obligations of the future distributors in the privatization bid documents**
- **For the remaining areas, continue with the analysis of isolated systems, new technologies, financing strategies, and operation and ownership options**
- **Focus the privatization of ENEL on the need of “privatizar para electrificar”**
- **Seek the support of the multilateral agencies**



# Coordination of the Plan

